medium". Since, the cited combined references do not teach or make obvious the features recited in allowed claim 61, clearly, claim 82 is also allowable thereover.

In view of the foregoing, applicant respectfully solicits (1) expedited prosecution and allowance hereof, and (2) reconsideration and all of the claims now in the application, namely claims 61-75 and 82.

In addition, the inventor wishes to add the following:

--- The disclosure of 5,038,338 is a filter of enhancing edge and detects an edge bascially by analyzing frequency.

However our invention identifies blood flow signal by comparing it with noise dispersion.
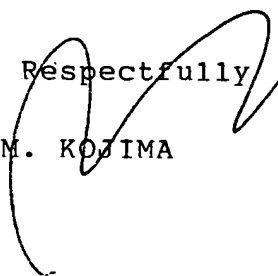
The disclosure of 4,761,819 is a noise fileter and suppresses noise itself. Our invention decreases intensities except intensity of blood flow signal. It does not suppress noise itself.

The idea of multi-slice is disclosed in 6,043,655, which suppresses signal of vein by applying sAT pulse and obtains an MR image of the vein from differences of two MR images. However, it is not related to image processing, which is our invention.----

Accordingly, reconsideration and allowance are respectfully solicted.

Respectfully

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AMENDMENT TO CLAIMS

Claims 1-60 (cancelled)

61.(currently amended)  An image processing method comprising
the steps of:

determining a variance of pixel values in a local region to
which a pixel of interest belongs, wherein each pixel constitu-
ting an image is defined as said pixel of interest;

~~enhancing~~ maintaining pixel value of said pixel of interest
when said determined value is larger than a particular variance of
noise; and

suppressing said pixel value of said pixel of interest when
said determined variance is less than said particular variance
of noise;

wherein each pixel constituting multi-slice images, and
the step of ~~enhancing~~ maintaining pixel value provides adjustment
of pixel values; and further comprising the steps of:

performing maximum intensity projection on said multi-slice
images subjected to said pixel value adjustment; and

adding to said determined variance a variance of pixel values
in a local region to which a corresponding pixel of interest in
an image of a neighboring slice belongs.

62.(original)  The method of claim 61, wherein said suppres-
sing of said pixel value is performed by multiplying by a coeffi-
cient of less than one.

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63.(original) The method of claim 61, wherein said suppressing of said pixel value is performed by subtracting a predefined numeric value.

64.(currently amended) The method of claim 61, wherein said ~~enhancing~~ _maintaining_ of said pixel value is performed by multiplying by a coefficient which is equal to or greater than one.

65.(currently amended) The method of claim 61, wherein said ~~enhancing~~ _maintaining_ of said pixel value is performed by adding a predetermined numeric value.

66. (original) The method of claim 61, further comprising the steps of:

determining a residual sum of squares of pixel values for each of a plurality of local regions defined over an entire image;

determining a histogram of said residual sum of squares; and

determining said particular variance of noise based on a residual sum of squares that gives a peak of said histogram.

67. (original) The method of claim 61, wherein said image is of a blood flow image.

68.(currently amended) An image processing apparatus comprising:

first means for determining a variance of pixel values in a local region to which a pixel of interest belongs, wherein each pixel constituting an image is defined as said pixel of interest;

second means for ~~enhancing~~ _maintaining_ pixel values of said pixel of interest when said determined variance is larger than a particular variance of noise;

third means for suppressing said pixel value of said pixel of interest when said determined variance is less than said particular variance of noise;

wherein each pixel constituting multi-slice images; and wherein said second means comprises means for adjusting said pixel value; and further comprising:

fourth means for performing maximum intensity projection on said multi-slice images subjected to said pixel value adjustment; and

fifth means for addding to said determined variance a variance of pixel values in a local region to which a corresponding pixel of interest in an image of a neighboring slice belongs.

69.(original)  The apparatus of claim 68, wherein said third means comprises means for suppressing said pixel value by multiplying with a coefficient of less than one.

70.(original)  The apparatus of claim 68, wherein said third means comprises means for suppressing said pixel values by subtracting a predefined numeric value.

71. (currently amended) The apparatus of claim 68, wherein said second means comprises means for ~~enhancing~~ maintaining said pixel value by multiplying with a coefficient which is equal to or greater than one.

72. (currently amended) The apparatus of claim 68, wherein said second means comprises means for ~~enhancing~~ maintaining said pixel value by adding a predefined numeric value.

73.(original)  The apparatus of claim 68, further comprising:

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sixth means for determining said particular variance of noise wherein said sixth means comprises:

means for determining a residual sum of squares of pixel values for each of a plurality of local regions defined over an entire image;

means for determining a histogram of said residual sum of squares; and

means for determining said particular variance of noise based on a residual sum of squares that gives a peak of said histogram.

74. (original) The apparatus of claim 68, wherein said image is of a blood flow image.

75. (currently amended) An image apparatus for producing an image based on signal collected from an object, said apparatus comprising:

means for determining a variance of pixel values in a local region to which a pixel of interest belongs, said pixel of interest being defined as being each pixel constituting an image;

means for enhancing maintaining said pixel value of said pixel of interest when said determined variance is larger than a particular variance of noise; and

means for suppressing said pixel value of said pixel of interest when said determined variance is less than said particular variance of noise; wherein

each pixel constitutes multi-slice images; and wherein said means for determining a variance of pixel values

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comprises means for adjusting said pixel values; and further comprising:

means for performing maximum intensity projection on said multi-slice images subjected to said pixel value adjustment; and

means for adding to said determined variance a variance of pixel values in a local region to which a corresponding pixel of interest in an image of a neighboring slice belongs.

Claims 76 - 81 (cancel)

82. (currently amended) A computer-readable medium having recorded thereon computer executable instructions for causing a computer to implement the functions of:

determining a particular variance of noise;

determining a variance of pixel values in a local region to which a pixel of interest belongs, wherein each pixel constituting an image is defined as said pixel of interest;

enhancing maintaining said pixel value of said pixel of interest when said determined variance is larger than said particular variance of noise; and

suppressing said pixel value of said pixel of interest when said determined value is less than said particular variance of noise ; wherein

each pixel constitutes multi-slice images; and the step of maintaining pixel value provides adjustment of pixel values; and further comprising the functions of:

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performing maximum intensity projection on said multi-slice images subjected to said pixel value adjustment; and

adding to said determined variance a variance of pixel values in a local region to which a corresponding pixel of interest in an image of a neighboring slice belongs.

Claims 83 and 84 (cancel)

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